UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA ST., N.W., SUITE 3100
ATLANTA, GEORGIA 30303

March 26, 1982

Gentlemen:

The enclosed Information Notice provides early notification of an event that may have safety significance. It is expected that recipients will review the information notice for possible applicability to their facilities. No specific action or response is requested at this time. If further NRC evaluations so indicate, an IE bulletin or circular will be issued to recommend or request specific licensee actions.

If you have any questions regarding this matter, please contact this office.

Sincerely,

James P. O'Reilly
Regional Administrator

Enclosure:
IE Information Notice No. 82-08

IE31

Distribution for IE Information Notice No. 82-08 (INFORMATION)
March 26, 1982

Addresses	In Reference To
1. Alabama Power Company Attn: R. P. McDonald Vice President-Nuclear Generation Post Office Box 2641 Birmingham, AL 35291	50-348 Farley Unit 1 50-364 Farley Unit 2
2. Carolina Power and Light Company Attn: J. A. Jones Senior Executive Vice President and Chief Operating Officer 411 Fayetteville Street Raleigh, NC 27602	50-325 Brunswick Unit 1 50-324 Brunswick Unit 2 50-400 Harris Unit 1 50-401 Harris Unit 2 50-261 Robinson Unit 2
3. Duke Power Company Attn: L. C. Dail, Vice President Design Engineering P. O. Box 33189 Charlotte, NC 28242	50-491 Cherokee Unit 1 50-492 Cherokee Unit 2 50-493 Cherokee Unit 3
4. Duke Power Company Attn: W. O. Parker, Jr. Vice President, Steam Production P. O. Box 2178 Charlotte, NC 28242	50-369 McGuire Unit 1 50-370 McGuire Unit 2 50-269 Oconee Unit 1 50-270 Oconee Unit 2 50-287 Oconee Unit 3 50-413 Catawba Unit 1 50-414 Catawba Unit 2
5. Florida Power and Light Company Attn: R. E. Uhrig, Vice President Advanced Systems and Technology P. O. Box 529100 Miami, FL 33152	50-335 St. Lucie Unit 1 50-389 St. Lucie Unit 2 50-250 Turkey Point Unit 3 50-251 Turkey Point Unit 4
6. Florida Power Corporation Attn: J. A. Hancock, Vice President Nuclear Operations P. O. Box 14042, Mail Stop C-4 St. Petersburg, FL 33733	50-302 Crystal River Unit 3

Addresses	In Reference To
7. Georgia Power Company Attn: J. H. Miller, Jr. Executive Vice President P. O. Box 4545 Atlanta, GA 30302	50-321 Hatch Unit 1 50-366 Hatch Unit 2 50-424 Vogtle Unit 1 50-425 Vogtle Unit 2
8. Mississippi Power and Light Company Attn: N. L. Stampley Vice President of Production P. O. Box 1640 Jackson, MS 39205	50-416 Grand Gulf Unit 1 50-417 Grand Gulf Unit 2
9. Offshore Power Systems Attn: A. R. Collier, President P. O. Box 8000 Jacksonville, FL 32211	50-437 FNP 1-8
10. South Carolina Electric and Gas Company Attn: T. C. Nichols, Jr., Vice President Power Production and System Operations P. O. Box 764 Columbia, SC 29218	50-395 Summer Unit 1
11. Tennessee Valley Authority Attn: H. G. Parris Manager of Power 500A Chestnut Street Tower II Chattanooga, TN 37401	50-438 Bellefonte Unit 1 50-439 Bellefonte Unit 2 50-259 Browns Ferry Unit 1 50-260 Browns Ferry Unit 2 50-296 Browns Ferry Unit 3 50-518 Hartsville Unit 1 50-519 Hartsville Unit 2 50-520 Hartsville Unit 3 50-521 Hartsville Unit 4 50-553 Phipps Bend Unit 1 50-554 Phipps Bend Unit 2 50-327 Sequoyah Unit 1 50-328 Sequoyah Unit 2 50-390 Watts Bar Unit 1 50-391 Watts Bar Unit 2 50-566 Yellow Creek Unit 1 50-567 Yellow Creek Unit 2
12. Virginia Electric and Power Company Attn: R. H. Leasburg Vice President Nuclear Operations P. O. Box 26666 Richmond, VA 23261	50-338 North Anna Unit 1 50-339 North Anna Unit 2 50-404 North Anna Unit 3 50-280 Surry Unit 1 50-281 Surry Unit 2

Addresses | In Reference To

13. Institute of Nuclear Power Operation
Attn: R. W. Pack
Lakeside Complex
1820 Waterplace
Atlanta, GA 30339

14. Southern Company Services, Inc.
ATTN: O. Batum, Manager
Nuclear Safety & Licensing
Department
P. O. Box 2625
Birmingham, AL 35202

15. Department of Energy
Clinch River Breeder Reactor
Plant Project Office
ATTN: Chief, Quality Improvement
P. O. Box U
Oak Ridge, TN 37830

16. EDS, Nuclear, Inc.
ATTN: E. H. Verdery
330 Technology Park/Atlanta
Norcross, GA 30092

SSINS No.: 6835
Accession No.:
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IN 82-08

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
WASHINGTON, D.C. 20555

March 26, 1982

IE INFORMATION NOTICE NO. 82-08: CHECK VALVE FAILURES ON DIESEL GENERATOR ENGINE COOLING SYSTEM

Description of Circumstances:

On October 23, November 19, and December 1, 1981, the Dresden Station experienced events concerning degradation of the Unit 2/3 and Unit 3 diesel generator (DG) cooling water systems. The Unit 2/3 DG is a single diesel generator that can be electrically aligned to serve either Unit 2 or Unit 3. The Unit 3 DG serves only Unit 3.

At approximately 0217 on October 23, 1981, a monthly DG surveillance test was commenced on the Unit 2/3 DG. The diesel was started normally from the control room. At approximately 0224, the Unit 2/3 DG tripped on high engine temperature. Cooling water flow to the DG heat exchanger was found to be inadequate. Attempts to restore adequate water pressure to the DG heat exchanger were unsuccessful and Unit 2/3 DG was declared inoperable. At approximately 0400, surveillance was commenced on the Unit 3 DG. Indications of insufficient cooling water flow were observed and a DG shutdown was commenced by the control room operators at about 0407. A few seconds later, the diesel tripped on high engine temperature. The Unit 3 DG cooling water pump (DGCWP) was cycled several times, during which time the pump was vented. At about 0417, immediately after one of the pump starts, Unit 3 DGCWP discharge pressure increased and the observed DG heat exchanger pressure returned to normal. The pump was cycled several more times without incident. A hot restart of the Unit 3 DG was then conducted, and the DGCWP and DG functioned normally. The Unit 2/3 DGCWP was then tested, found to operate satisfactorily and returned to service. Because of the unusual nature of the event, the licensee agreed to conduct daily surveillance tests on the Unit 2/3 and Unit 3 DGCWPs for 7 days while investigating the event.

At about 0453 on November 19, during a surveillance test of the Unit 3 DG, the diesel tripped on high engine temperature. The Unit 3 DGCWP was declared inoperable and the Unit 3 DG was removed from service. Dresden Unit 3 then operated under a Technical Specification limiting condition for operation while the event was investigated. On November 23, 1981, a broken check valve on the discharge of the Unit 3 DGCWP was found and replaced. The valve disc had broken free of the pivot arm and was lodged in the discharge side of the valve, restricting nearly all flow. The valve was replaced and DG 3 was returned to service. The failure of the 2/3 DGCWP on October 23 was not yet explained.

On December 1, 1981, the Unit 2/3 DGCWP exhibited a slow decrease in indicated discharge pressure accompanied by increasing noise and vibration levels at the pump. This decrease in indicated pressure and the increase in noise and vibration levels were later determined (through visual inspection, testing, and determination of actual bearing clearance) to have been caused by excessive wear of the DGCWP bearings. The pump was replaced. During the pump replacement, the licensee inspected the Unit 2/3 DGCWP discharge check valve and found it was broken. As was the case with the Unit 3 pump discharge check valve, the disc had broken free of the pivot arm. In the instance of the Unit 2/3 pump, however, the disc had not lodged into the body of the valve, but was free to move in any direction within the valve body. Although the Unit 2 diesel had functioned properly throughout the foregoing events, the discharge check valve for the Unit 2 DGCWP was inspected, found to be broken, and replaced. In the case of the Unit 2 DGCWP discharge check valve, the pivot arm remained attached to the valve disc, but was broken at the hinge to the valve body.

All three DGCWP systems at Dresden Units 2 and 3 involved check valve failures which were discovered during a short period of time. These failures were not adequately characterized by operator observations and instrument readings during diesel generator surveillance tests, but were discovered by direct inspection of the internals of the check valve. It is not known how long these check valves were broken before their condition was detected since the broken valve discs were free to move within the valve bodies and may have been that way for some time before coming to rest in a position which would restrict flow enough to cause the diesel to trip on high engine temperature. The subject check valves are horizontally mounted Crane, 8-inch, tilting-disc check valves, Type 373, and have a pressure rating of 125 psi.

This information is provided as notification of a potentially significant matter. It is noted that these check valves are not routinely covered by inservice testing programs or routine surveillances to verify valve operability. It is expected that recipients will review the information for possible applicability to their facilities. No specific action or response is requested at this time. If you have questions regarding this matter, please contact the Regional Administrator of the appropriate NRC Regional Office.

Attachment:
Recently issued IE Information Notices

Attachment
IN 82-08
March 26, 1982

RECENTLY ISSUED
IE INFORMATION NOTICES

Information Notice No.	Subject	Date of Issue	Issued to
82-08	Check Valve Failure on Diesel Generator Engine Cooling System	3/26/82	All power reactor facilities holding an OL or CP
82-07	Inadequate Security Screening Programs	03/16/82	All power reactor facilities holding an OL or CP
82-06	Failure of Steam Generator Primary Side Manway Closure Studs	03/12/82	All power reactor facilities holding an OL or CP
82-05	Increasing Frequency of Drug-Related Incidents	03/10/82	All power reactor facilities holding an OL or CP
82-04	Potential Deficiency of Certain AGASTAT E-7000 Series Time-Delay Relays	03/10/82	All power reactor facilities holding an OL or CP
82-03	Environmental Tests of Electrical Terminal Blocks	03/04/82	All power reactor facilities holding an OL or CP
82-01 Rev. 1	Auxiliary Feedwater Pump Lockout Resulting from Westinghouse W-2 Switch Circuitry Modification	02/26/82	All power reactor facilities holding an OL or CP
80-32 Rev. 1	Clarification of Certain Requirements for Exlusive-Use Shipments of Radio-active Materials	02/26/82	All facility, materials and Part 50 licensees
82-02	Westinghouse NBFD Relay Failures in Reactor Protection Systems at Certain Nuclear Power Plants	01/27/82	All power reactor facilities holding an OL or CP

OL = Operating License
CP = Construction Permit